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THE SPECTRUM OF NOVA T CORONAE

Nova T Coronae was discovered on May 12, 1866, as a 2nd magnitude star by Birmingham, Tutwider and Davis, independently. As it was possible to identify the nova with the star B. D. +26° .2765 which before the outburst was of magnitude 9.5, there arose the idea that novae are not new stars in a literal sense but rather a special class of variable stars. The star is remarkable in having a galactic latitude of 46°.8. The rapid decrease of its brightness to a magnitude near the original value places the star in a special class of novae.

At the time of discovery the spectrum of the nova was observed by Huggins and Miller, by Wolf and Rayet and by Stone and Carpenter. The observers noted an absorption spectrum and in addition bright lines at $\lambda\lambda$ 656, 502, 486, 471±, 467, 463 and 434. Lockyer stated (without giving particulars) that the spectrum in 1889 had changed into a nebular spectrum. Espin thought that the star in 1893 had a spectrum belonging to Secchi's Type III, and Miss Cannon classified the spectrum from a plate taken 1914 April 22 as Class Ko.

The visual magnitude of the star is now 9.4 and the photographic near 11.0. Visual estimates of magnitude do not show any light changes and the nova seems now essentially of the same brightness as it was before the outburst in 1866. Spectrograms of the star have been obtained this summer with the 1-prism instrument, using 12-inch and 6-inch cameras, attached to the 36-inch refractor. The plates show that the nova now has a typical Ma absorption spectrum with bright lines or bands superposed at 4859, 4686, 4661, 4365, 4349, 4331-4340, 4089-4106A. It is of interest to note that Huggins and Miller compared the absorption spectrum of the nova with that of *α Orionis* and *β Pegasi*, well-known Class Ma spectra. The nebular line 4686A appears on the spectrograms as a single line, Hβ is perhaps double and Hγ and Hδ have a complicated structure. Those bands seem to be double but they are blended with portions of bands in the absorption spectrum and difficult to interpret.

A spectrogram of the visual region shows Hα as a bright band about 22A broad. The most marked difference between the recent spectrum and the spectrum observed in 1866 seems to be that no trace now exists of the line λ502. The lines mentioned in 1866 at λλ463 and 467 are possibly the titanium flutings at λλ 4626 and 4668. The latter appears as a bright line on one of my plates.

The plate obtained on the nights of July 11th and 12th of this year, exposure 10,2 hours, gives from the absorption lines a radial velocity of −30 km. The displacement of some of the bright lines is shown in the following table:

λ (measured)	Identification	Displacement	Weight
6565.2	$H\alpha$	+2.4 A	½
4860.0	$H\beta$	−1.3 "	2
4686.0	4685.8 (nebular)	+0.2 "	1
4660.6	4658.2 (nebular)	+2.4 "	1
4365.1	4363.2 (nebular)	+1.9 "	1
4348.9	4347.0 (P *Cygni* ?)	+1.9 "	½

Lick Observatory, September, 1921. KNUT LUNDMARK.

NOTE ON THE SPECTRUM OF COMPONENT C IN THE TRIPLE SYSTEM o^2 ERIDANI

From a plate taken 1921 October 7 with the 36-inch refractor, light 1-prism spectrograph, and 6-inch camera, the spectrum of the fainter component (C) of the double companion BC to o^2 *Eridani* (= Burnham's *G. C.* No. 2109: BC: 1921.69, p. a. = 18°, dist. = 3½″, $B = 9^m.1$, $C = 10^m.8$, visual) may be provisionally classified as Md; $H\beta$, at least, is bright. The negative is weak, having been obtained thru clouds, but a stronger effective exposure will be secured immediately. On the assumption that the parallax of the triple star is $0''.196$, the absolute magnitude of C is +12.3. According to Dr. Adams[1], A0 is the spectral class of component B.

FREDERICK C. LEONARD.

Lick Observatory,
Mount Hamilton, Cal., 1921 Oct. 8.

RETURN OF ASTRONOMICAL INSTRUMENTS TO CHINA.

A letter just received from Professor Chang, Acting Director of the Central Observatory, Peking, China, brings the interesting news that the five bronze astronomical instruments purloined from the Peking Observatory at the time of the Boxer Rebellion by the officers of the German punitive forces in China, shipped to Germany and mounted on the lawn of the Kaiser's palace at Potsdam

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[1] *Publ. A. S. P.* **26** (1914), 198.